

Notice of Allowability

Application No.

10/036,181

Examiner

Gentle E. Winter

Applicant(s)

YI ET AL.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment and remarks submitted 1/26/04.
2. ☒ The allowed claim(s) is/are 1-4, 6, 8-10 (renumbered as 1-8).
3. ☒ The drawings filed on 28 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Arguments

1. Applicant argues that the rejection fails to take into account two significant structural limitations recited in claim 1. Specifically, (1) "said water flow field being dead ended in the region of the corresponding one of said reactant gas inlet manifolds." And (2) "a flow restrictor at the exhaust end" of the water flow field.
2. Applicant then argues that the prior art fails to disclose that the product water comes through the porous layer and is expelled. What is not clear, in the prior art of record is that the porous coolant plate corresponds to the "dead end". Based on the remarks it appears that dead end means many smaller openings along a path, forming the input and a single output. For the forgoing, the remarks are persuasive with respect to the "dead end" argument advanced by applicant.
3. The second point, related to a flow restrictor at the "exhaust end" is not apparently disclosed by Collins either. Collins does disclose a pressure control means and even discloses the disclosed pressure gradient. However, the pressure gradient in the Collins reference shows that the pressure of the coolant is lower than that of the reactants (to minimize the entrance of antifreeze into the fuel system).
4. For the forgoing reasons the rejections are withdrawn.

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Claim Rejections - 35 USC § 102--Withdrawn

1. Claims 1-4, 8, and 9 were rejected under 35 U.S.C. 102(a) as being anticipated by United States Patent No. 6,322,915 to Collins et al., hereinafter Collins. Applicant's credible arguments have distinguished the instant application from the prior art of record.

Claim Rejections - 35 USC § 103--Withdrawn

1. Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Collins and PGPub 20020106546 A1 to Perry et al. "Perry".

2. The arguments drawn to Collins, and addressed above, remove Collins as a reference.

3. Claims 6 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Collins and United States Patent No. 6,503,298 to Monzyk et al. The arguments drawn to Collins, and addressed above, remove Collins as a reference.

Allowable Subject Matter

4. Claims 1-4, 6, and 8-10, renumbered as 1-8 are allowed.

5. The following is an examiner's statement of reasons for allowance:

6. Applicants' arguments are deemed credible in their assertion that rejection fails to take into account two significant structural limitations recited in claim 1. Specifically, (1) "said water

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flow field being dead ended in the region of the corresponding one of said reactant gas inlet manifolds.” And (2) “a flow restrictor at the exhaust end” of the water flow field.

7. Applicant then argues that the prior art fails to disclose that the product water comes through the porous layer and is expelled. What is not clear, in the prior art of record is that the porous coolant plate corresponds to the “dead end”. Based on the remarks it appears that dead end means many smaller openings along a path, forming the input and a single output. For the forgoing, the remarks are persuasive with respect to the “dead end” argument advanced by applicant.

8. The second point, related to a flow restrictor at the “exhaust end” is not apparently disclosed by Collins either. Collins does disclose a pressure control means and even discloses the disclosed pressure gradient. However, the pressure gradient in the Collins reference shows that the pressure of the coolant is lower than that of the reactants (to minimize the entrance of antifreeze into the fuel system).

9. For the forgoing reasons the rejections are withdrawn.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (571) 272-1310.

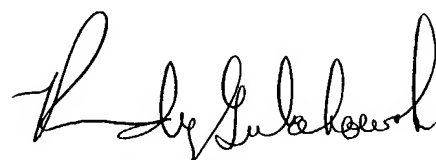
The examiner can normally be reached on Monday-Friday 7:00-3:30.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 273-1310.

Gentle E. Winter
Examiner
Art Unit 1746

March 12, 2004



RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700